REMARKS

Summary

Rejected Claims 1-11 have been canceled, and rejected Claim 23 has been amended to include the features of allowable dependent Claim 27. Therefore, should the outstanding rejections of Claims 1-11 and Claim 23 be withdrawn?

Status of the Claims

Claims 12-26, and 28-34 are pending. Claims 1-11 and Claim 27 have been canceled without prejudice. Claims 23-26 and 28-34 have been amended. Claims 12 and 23 are independent.

Requested Action

Applicant requests that the Examiner reconsider and withdraw the outstanding rejections in view of the foregoing amendments and the following remarks.

Allowable subject matter

The Examine has allowed Claims 12-20 and indicated that Claims 24 and 26-34 contain allowable subject matter and would be allowed if redrafted in independent form.

Substantive Rejections

Claims 1-11 are rejected under 35 U.S.C. § 101 as claiming the same invention as that of claims 1-11 of U.S. Patent No. 6,166,864 (Horiuchi), the parent of the above-referenced

application. Claims 23 and 25 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,671,062 (Nakamura).

Response to rejections

In response, while not conceding the propriety of the rejections, Claims 1-11 have been canceled without prejudice and Claim 23 has been amended to include the features of allowable dependent Claim 27. Therefore, the independent Claims 12 and 23 and their dependent claims are now in allowable form. Accordingly, early passage to issue is respectfully solicited.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

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MARKED-UP CLAIM SHEET

23. (Amended) A zoom lens comprising, in order from an object side to an image side,

a first lens unit of positive optical power,

a second lens unit of negative optical power, said second lens unit moving during zooming,

a third lens unit of positive optical power,

a fourth lens unit of positive optical power, said fourth lens unit moving during zooming,

wherein said third lens unit has a positive lens, both surfaces of which are aspherical, and

wherein said second lens unit has three negative lenses and one positive lens.

24. (Amended) A zoom lens according to Claim [21] 23, satisfying the following condition:

$$0.24 < |f2/fA| < 0.33$$

where

$$fA = \sqrt{fw \cdot ft}$$

wherein fw and ft are focal lengths at the wide-angle end and the telephoto end of the entire zoom lens, and f2 is the focal length of said second lens unit.

25. (Amended) A zoom lens according to Claim [21] 23, satisfying the following condition:

$$0.86 < |f3/fA| < 1.09$$

where

$$fA=\sqrt{fw \cdot ft}$$

wherein fw and ft are focal lengths at the wide-angle end and the telephoto end of the entire zoom lens, and f3 is a focal length of said third lens unit.

26. (Amended) A zoom lens according to Claim [21] 23, wherein said fourth lens unit moves during focusing, and the following condition is satisfied:

$$0.40 < \beta 4T < 0.55$$

wherein $\beta 4T$ is the magnification at the telephoto end of said fourth lens unit with an object at infinity.

28. (Amended) A zoom lens according to Claim [21] 23, satisfying the following conditions:

$$36 < \nu n < 65$$

$$20 < \nu p < 35$$

where νn is the mean Abbe number of the materials of the negative lenses that constitute said second lens unit, and νp is the mean Abbe number of the material of the positive lens which constitutes said second lens unit.

29. (Amended) A zoom lens according to Claim [25] 23, satisfying the following condition:

$$70 < Nn < 1.95$$

where Nn is the mean refractive index of the materials of the negative lenses that constitute said second lens unit.

30. (Amended) A zoom lens according to Claim [25] 23, wherein said second lens unit comprises, in order from an object side to an image side,

a first negative lens having a concave surface of stronger optical power on the image side than on the object side,

a second negative lens both surfaces of which are concave,

a first positive lens having a convex surface of stronger optical power on the object side than on the image side, and

a third negative lens, both surface of which are concave.

31. (Amended) A zoom lens according to Claim [28] 30, satisfying the following condition:

$$0.82 < |R22/f2| < 1.07$$

where R22 is the radius of curvature of the second lens surface counted from the object side of said second lens unit and f2 is the focal length of said second lens unit.

32. (Amended) A zoom lens according to Claim [28] 30, satisfying the following condition:

$$66 < |R24/R25| < 4.00$$

where R24 and R25 are the radii of curvature of the fourth lens surface and the fifth lens surface, respectively, counted from the object side, of said second lens unit.

33. (Amended) A zoom lens according to Claim [28] 30, satisfying the following condition:

$$00 < |R26/R27| < 1.46$$

where R26 and R27 are the radii of curvature of the sixth lens surface and the seventh lens surface, respectively, counted from the object side, of said second lens unit.

34. (Amended) An optical appliance comprising a zoom lens according to Claim [21] 23.